

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

5 Listing of Claims:

1-27. (Canceled)

28. (Currently amended) An insulated electrical wire comprising

1) a metallic conductor, and

2) insulation which comprises

(i) a first layer which consists of a first polymeric composition consisting of a first polymeric portion and optionally a first additive portion, the first polymeric portion comprising at least 60% by weight, based on the weight of the first polymeric portion, of a carbonyl-containing polymer having a non-aromatic backbone and comprising at least 5% by weight, based on the weight of the carbonyl-containing polymer, of repeating units derived from an alkyl acrylate, ~~and a monomer which can be copolymerized with an olefinic monomer and which contains a carboxylic acid ester group~~, and

(ii) a second layer which is in direct contact with the first layer at an interface, and which consists of a second polymeric composition consisting of a second polymeric portion and optionally a second additive portion, the second polymeric portion comprising at least 50% by weight, based on the weight of the second polymeric composition, of ~~polyvinylidene fluoride (PVDF)~~ or a vinylidene fluoride (VDF) copolymer consisting essentially of

(a) repeating units derived from vinylidene fluoride, and

(b) repeating units derived from a fluorinated comonomer;

the first layer being positioned between the conductor and the second layer.

29. (Previously presented) An insulated wire according to claim 28 wherein polymers at the interface between the first and second layers are crosslinked.

30. (Previously presented) An insulated wire according to Claim 29 wherein the crosslinking of polymers at the interface is such that at least one of the following conditions is fulfilled:

(a) the peel bond strength between the layers, measured by ASTM

81876- 95, is at least 5N,

(b) when a sample of the insulated electrical wire 60 mm long is immersed to a depth of 42 mm in a bath of acetone at 23 °C for 1 hour, there is no delamination of the two layers, and

(c) the peel bond strength between the layers after the crosslinking, measured by

ASTM B1876-95, is at least 100% greater than the peel bond strength between the layers before the crosslinking, measured by ASTM B1876-95.

31. (Previously presented) An insulated wire according to claim 28 wherein the first polymeric portion consists essentially of the carbonyl-containing polymer and polyethylene.

32. (Previously presented) An insulated wire according to claim 28 wherein the first polymeric portion consists essentially of the carbonyl-containing polymer and high density polyethylene.

33. (Previously presented) An insulated wire according to claim 28 wherein the second polymeric portion comprises at least 50% by weight, based on the weight of the second polymeric composition, of the VDF copolymer, and the VDF copolymer contains 8 to 12% by weight, based on the weight of the copolymer, of units derived from hexafluoropropylene.

34-36. (Canceled)

37. (Currently amended) An insulated electrical wire comprising

1) a metallic conductor, and

2) insulation which comprises

(i) a first layer which consists of a first polymeric composition consisting of a first polymeric portion and optionally a first additive portion, the first polymeric portion consisting essentially of 60 to 100% by weight, based on the weight of the first polymeric portion, of a carbonyl-containing polymer, and 0 to 40% by weight, based on the weight of the first polymeric portion, of polyethylene, the carbonyl-containing polymer having a non-aromatic backbone and consisting essentially of

(a) 9 to 100% by weight, based on the weight of the carbonyl-containing polymer, of repeating units derived from an alkyl acrylate, and a monomer which can be copolymerized with an olefin and which contains a carboxylic acid ester group, and

(b) 91 to 0% by weight, based on the weight of the carbonyl-containing polymer, of repeating units derived from an olefin; and

(ii) a second layer which is in direct contact with the first layer at an interface, and which consists of a second polymeric composition consisting of a second polymeric portion and optionally a second additive portion, the second polymeric portion comprising 90 to 100% by weight, based on the weight of the second polymeric composition, of ~~polyvinylidene fluoride (PVDF)~~ or a vinylidene fluoride (VDF) copolymer consisting essentially of

(a) repeating units derived from vinylidene fluoride, and

(b) repeating units derived from a fluorinated comonomer;

the first layer being positioned between the conductor and the second layer.

38. (Previously presented) An insulated wire according to Claim 37 wherein polymers at the interface between the first and second layers are cross-linked.

39. (Previously presented) An insulated wire according to Claim 38 wherein the crosslinking of polymers at the interface is such that, when a sample of the insulated electrical wire 60 mm long is immersed to a depth of 42 mm in a bath of acetone at 23 °C for 1 hour, there is no delamination of the two layers.

40. (Previously presented) An insulated wire according to Claim 37 wherein the first polymeric portion comprises at least 80% by weight, based on the weight of the first polymeric portion, of the carbonyl-containing polymer.

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41. (Canceled)

42. (Currently amended) An insulated wire according to Claim 37 wherein the carbonyl-containing polymer contains 15 to 28% by weight, based on the weight of the carbonyl-

10 containing polymer, of the repeating units derived from an alkyl acrylate ~~containing a carboxylic acid-ester group~~.

43-45. (Canceled)

15 46. (Previously presented) An insulated wire according to Claim 37 wherein the first polymeric portion consists essentially of high-density polyethylene and at least 80% of the carbonyl-containing polymer.

47. (Previously presented) An insulated electrical wire comprising

- 20 1) a metallic conductor, and
2) insulation which comprises
(i) a first layer which surrounds and directly contacts the metallic conductor, and which consists of a first polymeric composition consisting of a first polymeric portion and optionally a first additive portion, the first polymeric portion consisting essentially of 60
25 to 100% by weight, based on the weight of the first polymeric portion, of a carbonyl-containing polymer, and 0 to 40% by weight, based on the weight of the first polymeric portion, of polyethylene, the carbonyl-containing polymer having a non-aromatic backbone and consisting essentially of
(a) 15 to 28% by weight, based on the weight of the carbonyl-containing
30 polymer, of repeating units derived from an alkyl acrylate, and

- (b) 85 to 72% by weight, based on the weight of the carbonyl-containing polymer, of repeating units derived from ethylene; and
- (ii) a second layer which surrounds and directly contacts the first layer and which consists of a second polymeric composition consisting of a second polymeric portion and optionally a second additive portion, the second polymeric portion comprising 90 to 100% by weight, based on the weight of the second polymeric composition, of a vinylidene fluoride (VDF) copolymer consisting essentially of
 - (a) 88 to 92% by weight, based on the weight of the VDF copolymer, of repeating units derived from vinylidene fluoride, and
 - (b) 8 to 12% by weight, based on the weight of the VDF copolymer, of repeating units derived from hexafluoropropylene.

48. (Previously presented) An insulated wire according to Claim 47 wherein polymers at the interface between the first and second layers are crosslinked.

49. (Previously presented) An insulated wire according to Claim 48 wherein the crosslinking of polymers at the interface is such that, when a sample of the insulated electrical wire 60 mm long is immersed to a depth of 42 mm in a bath of acetone at 23 °C for 1 hour, there is no delamination of the two layers.

50. (Previously presented) An insulated wire according to Claim 47 wherein the alkyl acrylate is one or both of ethyl acrylate and methyl acrylate.

51. (Currently amended) A method of making an insulated wire, the method comprising the steps of

- (A) providing a metallic conductor surrounded by
 - (i) a first layer which consists of a first polymeric composition consisting of a first polymeric portion and optionally a first additive portion, the first polymeric portion comprising at least 60% by weight, based on the weight of the first polymeric portion, of a carbonyl-containing polymer having a non-aromatic backbone and containing at least

5% by weight, based on the weight of the carbonyl-containing polymer, of repeating units derived from an alkyl acrylate; and ~~a monomer which can be copolymerized with an olefinic comonomer and which contains a carboxylic acid ester group; and~~

(ii) a second layer which consists of a second polymeric composition consisting of a second polymeric portion and optionally a second additive portion, the second polymeric portion comprising at least 50% by weight, based on the weight of second polymeric composition, of a fluoropolymer which is ~~polyvinylidene fluoride (PVDF)~~ or a vinylidene fluoride (VDF) copolymer consisting essentially of

(a) repeating units derived from vinylidene fluoride, and

(b) repeating units derived from a fluorinated comonomer;

the first and second layers being in direct contact with each other at an interface, and the first layer being positioned between the conductor and the second layer; and

(B) exposing the layers while in contact with each other to ionizing radiation which causes cross-linking of polymers at the interface.

52. (Previously presented) A method according to Claim 51 wherein step (A) comprises bringing the respective layers into contact with each other at a temperature above the melting or softening point of polymeric material in at least one of the layers.

53. (Previously presented) A method according to Claim 51 wherein step (A) includes pressure-extruding layer (i) onto the conductor.

54. (Previously presented) A method according to Claim 51 wherein step (A) comprises coextruding the layers (i) and (ii) onto the conductor in a single pass of the conductor from an extrusion process pay-out device to an extrusion process take-up device.

55-56. (Canceled)

57. (Currently amended) An insulated electrical wire comprising

1) a metallic conductor, and

2) insulation which comprises

(i) a first layer which consists of a first polymeric composition consisting of a first polymeric portion and optionally a first additive portion, the first polymeric portion comprising at least 60% by weight, based on the weight of the first polymeric composition, of a carbonyl-containing polymer having a non-aromatic backbone and comprising at least 5% by weight, based on the weight of the carbonyl-containing polymer, of repeating units derived from an alkyl acrylate, and a monomer which can be copolymerized with an olefinic monomer and which contains a carboxylic acid ester group, and

(ii) a second layer which is in direct contact with the first layer at an interface, and which consists of a second polymeric composition consisting of a second polymeric portion and optionally a second additive portion, the second polymeric portion comprising at least 50% by weight, based on the weight of the second polymeric composition, of ~~polyvinylidene fluoride (PVDF)~~ or a vinylidene fluoride (VDF) copolymer consisting essentially of

- (a) repeating units derived from vinylidene fluoride, and
- (b) repeating units derived from a fluorinated comonomer;

the first layer being positioned between the conductor and the second layer.

58. (Previously presented) An insulated wire according to claim 57 wherein polymers at the interface between the first and second layers are crosslinked.

59. (Previously presented) An insulated wire according to claim 58 wherein the crosslinking of polymers at the interface is such that at least one of the following conditions is fulfilled:

- (a) the peel bond strength between the layers, measured by ASTM 81876- 95, is at least 5N,
- (b) when a sample of the insulated electrical wire 60 mm long is immersed to a depth of 42mm in a bath of acetone at 23 °C for 1 hour, there is no delamination of the two layers, and

(c) the peel bond strength between the layers after the crosslinking, measured by ASTM B1876-95, is at least 100% greater than the peel bond strength between the layers before the crosslinking, measured by ASTM B1876-95.

5 60. (Previously presented) An insulated wire according to claim 57 wherein the first polymeric portion consists essentially of the carbonyl-containing polymer and high density polyethylene.

10 61. (Previously presented) An insulated wire according to claim 57 wherein the second polymeric portion comprises at least 50% by weight, based on the weight of the second polymeric composition, of the VDF copolymer, and the VDF copolymer is a copolymer of VDF and hexafluoropropylene (HFP) which contains 8 to 12 % by weight, based on the weight of the copolymer, of units derived from HFP.

15 62. (Currently amended) An insulated electrical wire comprising

- 1) a metallic conductor, and
- 3) insulation which comprises

20 (i) a first layer which consists of a first polymeric composition consisting of a first polymeric portion and optionally a first additive portion, the first polymeric portion comprising 60 to 100% by weight, based on the weight of the first polymeric composition, of a carbonyl-containing polymer, and 0 to 40% by weight, based on the weight of the first polymeric composition, of high-density polyethylene, the carbonyl-containing polymer having a non-aromatic backbone and consisting essentially of

25 (a) 9 to 100% by weight, based on the weight of the carbonyl-containing polymer, of repeating units derived from an alkyl acrylate, and ~~a monomer which can be copolymerized with an olefin and which contains a carboxylic acid ester group, and~~

30 (b) 91 to 0% by weight, based on the weight of the carbonyl-containing polymer, of repeating units derived from an olefin; and

(ii) a second layer which is in direct contact with the first layer at an interface, and which consists of a second polymeric composition consisting of a second polymeric portion and optionally a second additive portion, the second polymeric portion comprising 90 to 100% by weight, based on the weight of the second polymeric composition, of ~~polyvinylidene fluoride (PVDF)~~ or a vinylidene fluoride (VDF) copolymer consisting essentially of

- (a) repeating units derived from vinylidene fluoride, and
- (b) repeating units derived from a fluorinated comonomer;

the first layer being positioned between the conductor and the second layer.

63. (Previously presented) An insulated wire according to Claim 62 wherein polymers at the interface between the first and second layers are crosslinked.

64. (Previously presented) An insulated wire according to Claim 62 wherein the first polymeric portion comprises at least 80% by weight, based on the weight of the first polymeric portion, of the carbonyl-containing polymer.

65. (Currently amended) An insulated wire according to Claim 62 wherein the carbonyl-containing polymer contains 15 to 28% by weight, based on the weight of the carbonyl-containing polymer, of the repeating units derived from an alkyl acrylate ~~containing a carboxylic acid ester group~~.

66. (Currently amended) An insulated wire according to Claim 62 wherein the alkyl acrylate is one or both of repeating units containing a carboxylic acid ester group ~~comprise units derived from vinyl acetate, ethyl acrylate and or methyl acrylate.~~

67. (Previously presented) An insulated wire according to Claim 62 wherein the polymeric portion of the first polymeric composition consists essentially of high-density polyethylene and the carbonyl-containing polymer.

68. (Previously presented) An insulated electrical wire comprising

- 1) a metallic conductor, and
- 2) insulation which comprises

(i) a first layer which surrounds and directly contacts the metallic conductor, and which consists of a first polymeric composition consisting of a first polymeric portion and optionally a first additive portion, the first polymeric portion consisting essentially of 60 to 100% by weight, based on the weight of the first polymeric portion, of a carbonyl-containing polymer, and 0 to 40% by weight, based on the weight of the first polymeric portion, of high-density polyethylene, the carbonyl-containing polymer having a non-aromatic backbone and consisting essentially of

- (a) 15 to 28% by weight, based on the weight of the carbonyl-containing polymer, of repeating units derived from an alkyl acrylate, and
- (b) 85 to 72% by weight, based on the weight of the carbonyl-containing polymer, of repeating units derived from ethylene; and

(ii) a second layer which surrounds and directly contacts the first layer at an interface and which consists of a second polymeric composition consisting of a second polymeric portion and optionally a second additive portion, the second polymeric portion comprising 90 to 100% by weight, based on the weight of the second polymeric composition, of a vinylidene fluoride (VDF) copolymer consisting essentially of

- (a) 88 to 92% by weight, based on the weight of the VDF copolymer, of repeating units derived from vinylidene fluoride, and
- (b) 8 to 12% by weight, based on the weight of the VDF copolymer, of repeating units derived from hexafluoropropylene.

69. (Previously presented) An insulated wire according to Claim 68 wherein polymers at the interface between the first and second layers are crosslinked.

70. (Previously presented) An insulated wire according to Claim 68 wherein the alkyl acrylate is one or both of ethyl acrylate and methyl acrylate.

71. (Currently amended) A method of making an insulated wire, the method comprising the steps of

(A) providing an electrical conductor surrounded by

(i) a first layer which consists of a first polymeric composition consisting of a first polymeric portion and optionally a first additive portion, the first polymeric portion comprising at least 60% by weight, based on the weight of the first polymeric composition, of a carbonyl-containing polymer having a non-aromatic backbone and containing at least 5% by weight, based on the weight of the carbonyl-containing polymer, of repeating units derived from an alkyl acrylate; and a monomer which can be copolymerized with an olefinic comonomer and which contains a carboxylic acid ester group; and

(ii) a second layer which consists of a second polymeric composition consisting of a second polymeric portion and optionally a second additive portion, the second polymeric portion comprising at least 50% by weight, based on the weight of second polymeric composition, of a fluoropolymer which is ~~polyvinylidene fluoride (PVDF)~~ or a vinylidene fluoride (VDF) copolymer consisting essentially of

(a) repeating units derived from vinylidene fluoride, and

(b) repeating units derived from a fluorinated comonomer;

the first and second layers being in direct contact with each other at an interface, and the first layer being positioned between the conductor and the second layer; and

(B) exposing the layers while in contact with each other to ionizing radiation which causes cross-linking of polymers at the interface.

72-73. (Canceled)

74. (Previously presented) A method according to claim 71 wherein the first polymeric portion consists essentially of the carbonyl-containing polymer and polyethylene.

75. (Previously presented) A method according to claim 51 wherein the first polymeric portion consists essentially of the carbonyl-containing polymer and polyethylene.